Higher Education Global Trends and Emerging Opportunities to 2020

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Summary of future higher education opportunities for global engagement (2020)

International tertiary education opportunity	Future opportunities[4]
International student mobility	• **Largest outbound mobile student flows by origin (2020):** China (585k), India (296k), South Korea (134k), Germany (100k), Turkey (84k), Malaysia (82k), Nigeria (67k) • **Fastest growing (absolute) outbound mobile student flows (next decade):** India (71k), Nigeria (30k), Malaysia (22k), Nepal (17k), Pakistan (17k), Saudi Arabia (16k), Turkey (13k) • **Largest inbound mobile student flows by destination (2020):** US (582k), UK (331k), Australia (277k), Canada (176k), Germany (155k) – China and Malaysia are also likely to feature here • **Fastest growing (absolute) inbound mobile student flows (next decade):** Australia (51k), UK (28k), US (27k), Canada (23k) – again China will surely feature here • **Major bilateral mobile student flows (2020):** India to US (118k), China to US (101k), China to Australia (93k), South Korea to US (81k), China to Japan (64k), India to UK (59k) – flows to China, and possibly India also • **Fastest growing (absolute) bilateral mobile student flows (next decade):** India to UK (20k), India to US (19k), China to Australia (17k), Nigeria to UK (14k), India to Australia (11k) – flows to China, and possibly India also • **Fastest declining (absolute) bilateral mobile student flows (next decade):** China to Japan (-14k), Japan to US (-8k), China to US (-8k), China to UK (-7k), Kazakhstan to Russia (-5k), Greece to UK (-4k) – the impact of China's aggressive pursuit of international students could well lead to some well-established bilateral flows declining
Size and growth of domestic tertiary education systems	• **Largest tertiary enrolment levels (2020):** China (37.4m), India (27.8m), US (20.0m), Brazil (9.2m), Indonesia (7.7m), Russia (6.3m), Japan (3.8m), Turkey (3.8m), Iran (3.8m), Nigeria (3.6m) • **Fastest growing (absolute) tertiary enrolment growth (next decade):** India (7.1m), China (5.1m), Brazil (2.6m), Indonesia (2.3m), Nigeria (1.4m), Philippines (0.7m), Bangladesh (0.7m), Turkey (0.7m), Ethiopia (0.6m) – growth in certain markets could be larger still if ambitious international student recruitment targets are met • **Largest falls in outbound mobile students (next decade):** Japan (-10k), Greece (-10k), Poland (-8k), Singapore (-6k), Russia (-6k), Germany (-2k) – China is one to watch here given its demographic outlook and ambitious domestic tertiary sector expansion plans

Box 4.1: Global higher education sector to 2020 – key facts

Tertiary enrolments – forecast to rise across most countries to 2020, but at a slower rate than previous decades (1.4 per cent per annum compared to 5–6 per cent per annum); 21 million additional tertiary enrolments by 2020; Chinese growth significantly down but still second largest absolute increase behind India; other emerging economies with significant forecast growth in tertiary enrolments over the next decade include: Brazil (+2.6 million), Indonesia (+2.3 million), Nigeria (+1.4 million), Philippines (+0.7 million), Bangladesh (+0.7 million), Turkey (+0.7 million) and Ethiopia (+0.6 million).

International student mobility – largest numbers of mobile students in 2020 expected to be from China (585,000), India (296,000), South Korea (134,000), Germany (100,000), Turkey (84,000), Malaysia (82,000) and Nigeria (67,000); largest increase from India (+71,000 from 2011), followed by Nigeria, Malaysia, Nepal, Pakistan, Saudi Arabia and Turkey.

TNE – Asia and Middle East to continue to offer strongest growth opportunities; legal, political and institutional frameworks in host countries a key driver, alongside tertiary enrolment demand.

Academic international research collaboration – largest recent growth in collaborative articles in the US (+78,000 since 2000) and China (+40,000); growth to 2020 expected to be driven by high volume markets, with China matching the US by the end of the decade.

Business international research collaboration – likely to see significant revenue growth from global 'open innovation' partnerships between multinational companies, SMEs and universities. Opportunities in countries with high and unexploited innovative collaborations with the tertiary sectors, and countries with high and growing internationally-filed patents.

International higher education opportunity	Current opportunities	Future opportunities
International student mobility	• **Largest outbound mobile student flows by origin (2009):** China (568k), India (211k), South Korea (127k), Germany (105k), Turkey (72k), France (68k), Kazakhstan (67k), Russia (62k), Malaysia (58k). • **Fastest growing (absolute) outbound mobile student flows (2002–09):** China (386k) and India (123k). Also Germany (48k), South Korea (44k), Vietnam (43k), Saudi Arabia (40k), Russia (36k), Nigeria (25k), Turkey (24k). • **Highest outbound student mobility ratios (2009):** Botswana (49%), Trinidad & Tobago (32%), Mauritius (29%), Zimbabwe (13%), Hong Kong (13%), Angola (11%), Singapore (10%), Ireland (10%), Morocco (10%), Sri Lanka (10%), UAE (7%) (though several of these are low-volume countries). • **Largest inbound mobile student flows by destination (2009):** US (661k), UK (369k), Australia (258k), Germany (257k), France (249k), Canada (190k), Russia (136k) and Japan (132k). UNESCO figure for inbound mobile student flows to China in 2010 is 72k but estimate from Project ATLAS is much higher at 265k (main student origin countries are South Korea, Japan, US, Thailand and Vietnam). UNESCO figure for inbound mobile student flows to Malaysia in 2009 is 58k but estimate from Project ATLAS is again higher at 87k. The variations are mainly because of non-degree students in Project Atlas data. • **Fastest growing (absolute) inbound mobile student flows (2004–09):** Australia (91k), US (88k), UK (63k), Russia (60k), and Canada (57k). Also strong growth in inbound mobile student flows to China, Malaysia and possibly other countries where data are not well reported, e.g. in Gulf States. • **Highest inbound student mobility ratios (2009):** UAE (39%), New Zealand (26%), Australia (22%), Singapore (20%), UK (15%), Switzerland (15%), France (12%). • **Major bilateral mobile student flows (2009):** China to US (124k), India to US (102k), China to Japan (79k), South Korea to US (74k), China to Australia (70k), and China to UK (47k). Inbound flows to China would also likely feature in this list. • **Fastest growing (absolute) bilateral mobile student flows (2002–09):** China to US (61k), China to Australia (53k), China to Japan (38k), China to South Korea (37k), India to US (35k), China to Canada (34k), China to UK (30k), India to UK (28k), South Korea to UK (25k). Inbound flows to China	• **Largest outbound mobile student flows by origin (2020):** China (585k), India (296k), South Korea (134k), Germany (100k), Turkey (84k), Malaysia (82k), Nigeria (67k). • **Fastest growing (absolute) outbound mobile student flows (next decade):** India (71k), Nigeria (30k), Malaysia (22k), Nepal (17k), Pakistan (17k), Saudi Arabia (16k), Turkey (13k). • **Largest inbound mobile student flows by destination (2020):** US (582k), UK (331k), Australia (277k), Canada (176k), Germany (155k) – China, Malaysia are also likely to feature here. • **Fastest growing (absolute) inbound mobile student flows (next decade):** Australia (51k), UK (28k), US (27k), Canada (23k) – again China will surely feature here. • **Major bilateral mobile student flows (2020):** India to US (118k), China to US (101k), China to Australia (93k), South Korea to US (81k), China to Japan (64k), India to UK (59k) – flows to China and possibly India also. • **Fastest growing (absolute) bilateral mobile student flows (next decade):** India to UK (20k), India to US (19k), China to Australia (17k), Nigeria to UK (14k), India to Australia (11k) – flows to China also, and possibly India also. • **Fastest declining (absolute) bilateral mobile student flows (next decade):** China to Japan (-14k), Japan to US (-8k), China to US (-8k), China to UK (-7k), Kazakhstan to Russia (-5k), Greece to UK (-4k) – the impact of China's aggressive pursuit of international students could well lead to some well-established bilateral flows declining.

International higher education opportunity	Current opportunities	Future opportunities
International student mobility (continued)	• **Fastest declining (absolute) bilateral mobile student flows (2002–09):** Japan to US (-18k), Greece to UK (-13k), US to Australia (-6k), Singapore to Australia (-6k), Indonesia to Malaysia (-5k).	
Size and growth of domestic tertiary education systems	• **Largest tertiary enrolment levels:** China (29.6m), US (19.4m), India (19.1m), Russia (9.4m), Brazil (6.1m), Indonesia (4.9m), Japan (3.9m), Iran (3.4m), South Korea (3.3m), Turkey (3.0m). • **Fastest growing (absolute) tertiary enrolment growth (last decade):** China (17.3m) and India (8.2m). Also US (3.2m), Brazil (2.5m), Iran (1.8m), Indonesia (1.7m), Russia (1.4m), Turkey (1.3m), Vietnam (1.0m), Nigeria (0.8m), Bangladesh (0.7m), Pakistan (0.7m).	• **Largest tertiary enrolment levels (2020):** China (37.4m), India (27.8m), US (20.0m), Brazil (9.2m), Indonesia (7.7m), Russia (6.3m), Japan (3.8m), Turkey (3.8m), Iran (3.8m), Nigeria (3.6m). • **Fastest growing (absolute) tertiary enrolment growth (next decade):** India (7.1m), China (5.1m), Brazil (2.6m), Indonesia (2.3m), Nigeria (1.4m), Philippines (0.7m), Bangladesh (0.7m), Turkey(0.7m), Ethiopia (0.6m) – growth in certain markets could be larger still if ambitious international student recruitment targets are met. • **Largest falls in outbound mobile students (next decade):** Japan (-10k), Greece (-10k), Poland (-8k), Singapore (-6k), Russia (-6k), Germany (-2k) – China is one to watch here given its demographic outlook and ambitious domestic tertiary sector expansion plans.
TNE	• China, South Asia, Middle East, South East Asia, Latin America, Turkey, Nigeria.	• **Dual and joint degrees:** China, US, France, India, Germany. • **Franchising and validation:** Asia, Latin America, possibly Africa (Nigeria). • **Branch campuses:** Far East, possibly Middle East • **Online:** Gulf countries, Asia, possibly Scandinavia.
Academic international research collaboration	• Elite research and government-sponsored institutions. • Specifically for UK, Russell Group driving research volume. Opportunities for newer institutions in niche areas of specialism. Main opportunities in major research-producing nations, as well as smaller, research-intensive nations (e.g. Nordic countries, Switzerland, Israel).	• **Largest growth in research output:** volume growth to be driven by collaborations involving US and Chinese institutions. • **Highest collaboration rates:** research collaboration rates are higher in many smaller countries, such as Switzerland and Belgium (50–70%); they are low and declining in China (around 15%). Overall opportunity for collaboration depends on both the volume of research and propensity to collaborate. • **Highest average citation impacts:** Switzerland, Netherlands, Denmark and US – collaborating with these countries in theory should help to maintain and increase research average citation impacts.

Table 5.1: Current and future opportunities *(continued)*

International higher education opportunity	Potential barriers
International student mobility	• Student visa restrictions/migration laws • Post-graduation employment restrictions on mobile students in host countries • Political relations • Social and cultural norms (e.g. female students in some countries less likely to travel) – this factor works the opposite way for TNE
TNE	• Host country legal education framework • Political relations • Corruption • Security issues • Social and cultural norms (e.g. role of women) • Student quality concerns (impact on institutional reputation) • Language issues • Compatibility of pre-tertiary education systems across countries, and entry requirements to tertiary education
Academic international research collaboration	• Compatibility of research subject specialisms vs. demand, and compatibility of research methodological frameworks • Language • Researcher visa restrictions/migration laws • Lack of established relationships at individual researcher-to-researcher level • Political relations • Economic and fiscal climate, e.g. public funding of research
Business international research collaboration	• Tertiary sector often focused on pure research, not commercial applications • Large existing internal R and D spend by global companies (vertical integration) • Institutional funding constraints can prohibit new commercial initiatives

Table 5.2: Potential barriers to maximising opportunities

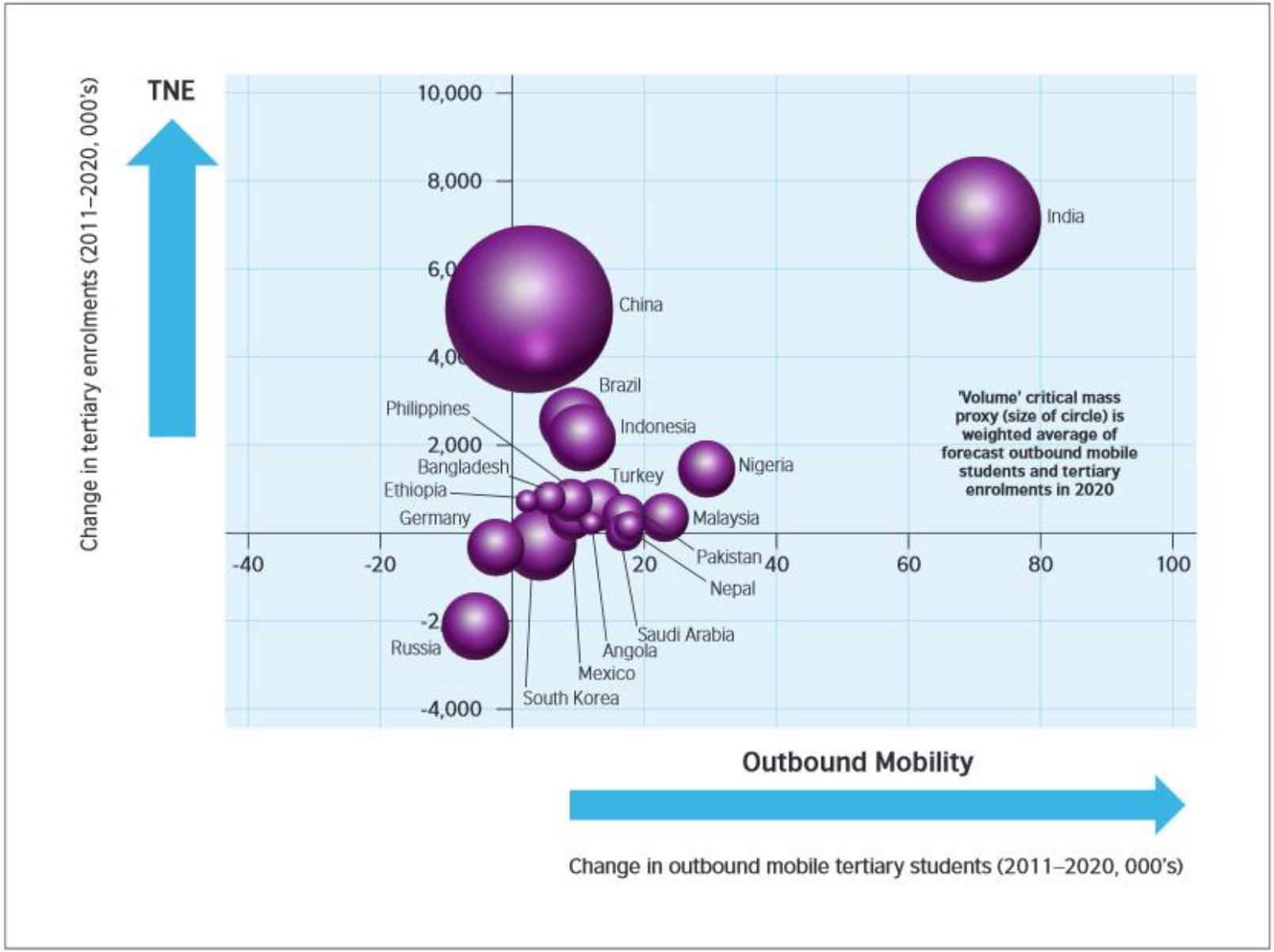
International higher education opportunity	Upside risks (↑)	Downside risks (↓)
International student mobility	• Significant catch-up potential in tertiary enrolment rates even beyond 2020 – tertiary enrolment rates could rise faster than forecast. • Continued strong economic growth and rising household incomes forecast for many emergers. • Continued globalisation and trade which is linked to student mobility, particularly as economies rebalance. • Rising gradient of skill demand across economies – economies will need more tertiary level graduates. • Gap in teaching standards and disparities in institutional quality and reputations between main origin and destination countries are still large. • English still the key language for global business (important for current dominant inbound markets) and increasing postgraduate provision taught in English in Europe (this would be a threat for the UK). • South Asia the new South East Asia.	• Rapid expansion of tertiary education capacity in traditional outbound markets (contributing to falling outbound mobility ratios). • Ambitious plans in traditional origin markets to attract inbound students (and reduce 'net' outflows) – threat to traditional inbound markets. • Future excess tertiary capacity in certain countries, e.g. Japan, Germany, may shift greater attention to attracting inbound students. • Gap in teaching standards and institutional quality falling (partly linked to emergers attracting overseas teaching staff) – countries such as Malaysia evolving to a new phase away from international student mobility to TNE. • Challenging economic environment in certain markets (particularly Europe), affecting household incomes. • China economy refocusing growth from exports to domestic demand. • Rising tuition fees in some markets – e.g. UK – linked to fiscal austerity (although this could be an opportunity for other markets).
TNE	• Significant catch-up potential in tertiary enrolment rates even beyond 2020 – tertiary enrolment rates could rise faster than forecast. • Rapid expansion of tertiary education 'volume' capacity in traditional outbound markets (contributing to falling outbound mobility ratios) – opposite direction of risk to downside risk for international student mobility. • Ambitious plans in traditional origin markets to attract inbound students (and reduce 'net' outflows) – threat to traditional inbound markets, but opportunity for TNE. • Countries such as Malaysia evolving to a new phase away from international student mobility to TNE. • Rising gradient of skill demand across economies – economies will need more tertiary level graduates. • Technology advancements and rising internet penetration (support distance learning). • Continued globalisation and cross-cultural awareness. • Gap in teaching standards and disparities in institutional quality and reputations between main origin and destination countries are still large – TNE can help to address quality issues.	• Reversal in demographics – stabilisation of global 18–22 population following historic rise. • Improvement in quality of domestic tertiary education capacity. • High levels of competition e.g. between US, UK, Australia and Canada, and increasingly China, Malaysia, Singapore and the Gulf States.

Table 5.3: Upside and downside risks to future opportunities

International higher education opportunity	Upside risks (↑)	Downside risks (↓)
Academic international research collaboration	• Continued globalisation and trade. • Economies moving up the value chain – need to undertake more R and D. • Growth in formal institutional partnerships. • Some markets still leaders in collaborative research specialism areas so will be in high demand.	• Equalisation of research capacity and specialisms across nations, e.g. China increasingly confident in its R and D capacity. • Reduction on public research funding linked to fiscal austerity. • High levels of competition – e.g. between US, UK, Germany, China, India.
Business international research collaboration	• Continued globalisation and trade. • Economies moving up the value chain – need to undertake more R and D. • Growth in financial incentives for tertiary-business collaboration. • Growth in global popularity of open innovation models.	• Tertiary sector incentivised to focus on pure research and routine citation impacts.

Table 5.3: Upside and downside risks to future opportunities *(continued)*

Future higher education opportunities for global engagement – major countries (2020)



Source: Oxford Economics

Future higher education opportunities for global engagement – top country listings (2020)

	Domestic tertiary education system		International student mobility – outbound		International student mobility – inbound	
	Size	Growth	Size	Growth	Size	Growth
Rank	2020	Next decade	2020	Next decade	2020	Next decade
1	China	India	China	India	US	Australia
2	India	China	India	Nigeria	UK	UK
3	US	Brazil	South Korea	Malaysia	Australia	US
4	Brazil	Indonesia	Germany	Nepal	Canada	Canada
5	Indonesia	Nigeria	Turkey	Pakistan	Germany	
6	Russia	Philippines	Malaysia	Saudi Arabia	France	
7	Japan	Bangladesh	Nigeria	Turkey	Japan	
8	Turkey	Turkey	Kazakhstan	Iraq	Russia	
9	Iran	Ethiopia	France	Zimbabwe		
10	Nigeria	Mexico	US	Angola	See point a	See point b

Note: Asian countries shaded in grey

a China, Malaysia and India will be amongst the top ten host countries by 2020. Due to the data issues discussed in this report the exact position of these host countries is difficult to forecast with certainty although China has potential to be one of the top three hosts of international students.

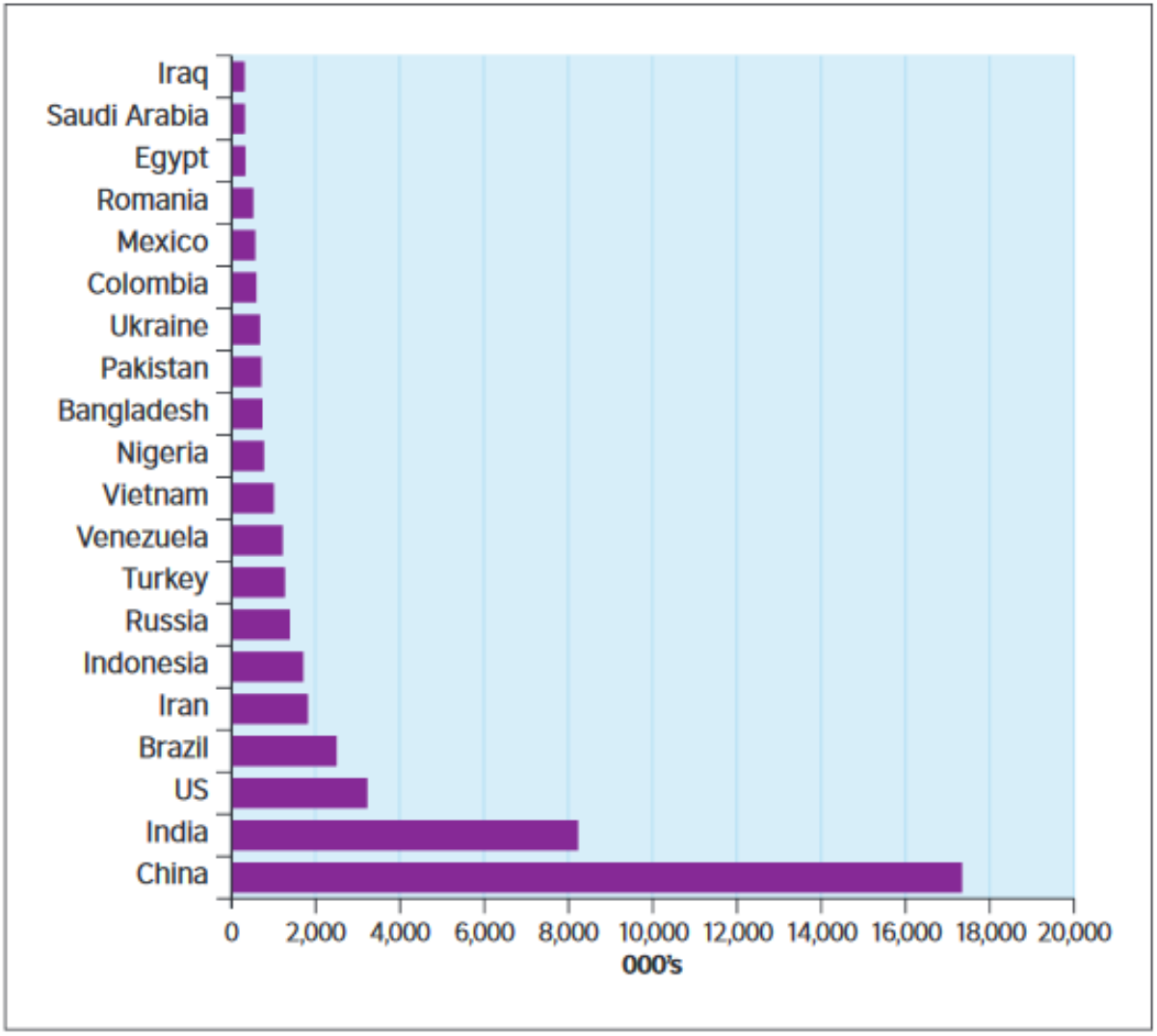
b China, Malaysia, Singapore and India will be in the top ten fastest growing hosts of internationally mobile students.

Tertiary enrolments

Based on the latest data available from UIS, total global tertiary enrolments were approximately 170 million in 2009.[9] The 50+ shortlisted countries focused on for this study make up over 150 million or 90 per cent of this total. Just four countries – China, India, US and Russia – have a combined share of 45 per cent of total global tertiary enrolments. Other emerging economies with significant numbers of tertiary enrolments include: Brazil (6.2 million), Indonesia (4.9 million), Iran (3.4 million), South Korea (3.3 million) and Turkey (3.0 million).

Global tertiary enrolments were approximately 65 million in 1990, so have increased by 160 per cent in 20 years or on average by five per cent per annum. The world's 18–22 age population over the same period grew by one per cent per annum, implying a significant rise in the global gross tertiary enrolment ratio.

Between 2002 and 2009, China and India dominated global growth in tertiary enrolments, accounting for 26 million (44 per cent) of the overall increase of 55 million. In percentage terms, a number of other countries of significant critical mass registered exceptionally strong growth rates in tertiary enrolments over the same period: Brazil (+68 per cent), Turkey (+74 per cent), Indonesia (+53 per cent), Nigeria (+68 per cent), Pakistan (+179 per cent), Malaysia (+41 per cent), Vietnam (+127 per cent), Saudi Arabia (+70 per cent) and Bangladesh (+84 per cent).



Source: UNESCO, Oxford Economics

Fig 2.1: Tertiary enrolment growth (2002–2009, 000's)

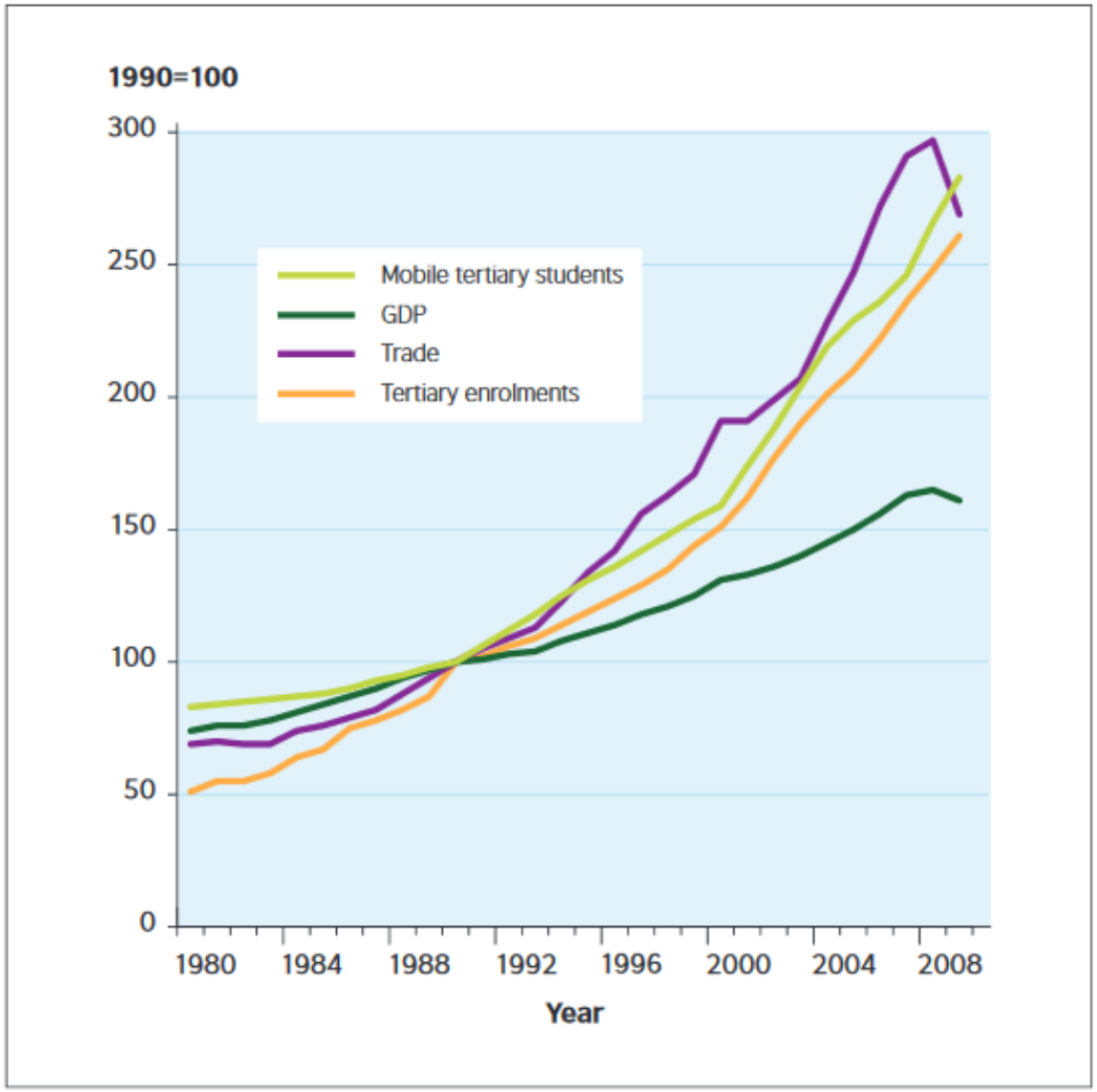
International student mobility

Another key feature of the global tertiary education sector has been the growth in international students. The number of international students in tertiary education has risen from 800,000 in the mid-1970s to over 3.5 million in 2009.

However, the outbound mobility ratio (mobile tertiary students divided by total tertiary enrolments) has remained remarkably stable from the early 1990s onwards at just over two per cent, reflecting a stable 'propensity' to study abroad. The 50+ shortlisted countries focused on for this study make up over 70 per cent of the global international students at tertiary level.

To set the growth of mobile tertiary students in context, its growth has been tracked against the growth in world gross domestic product (GDP) and world trade. Initially during the 1980s, growth in mobile students lagged behind both world GDP and world trade (and indeed global tertiary enrolments also). But from the early 1990s, mobile tertiary student growth (and tertiary enrolments overall) accelerated to outpace world GDP growth, and grow at a similar pace to world trade (see Fig 2.2).

It is difficult to determine the causality between mobile tertiary students and trade – and is beyond the scope of this research – but clearly there is a close association between the two, both in aggregate and at a bilateral country-to-country level (see Table 2.1 on page 20).



Source: UNESCO, OECD, Oxford Economics

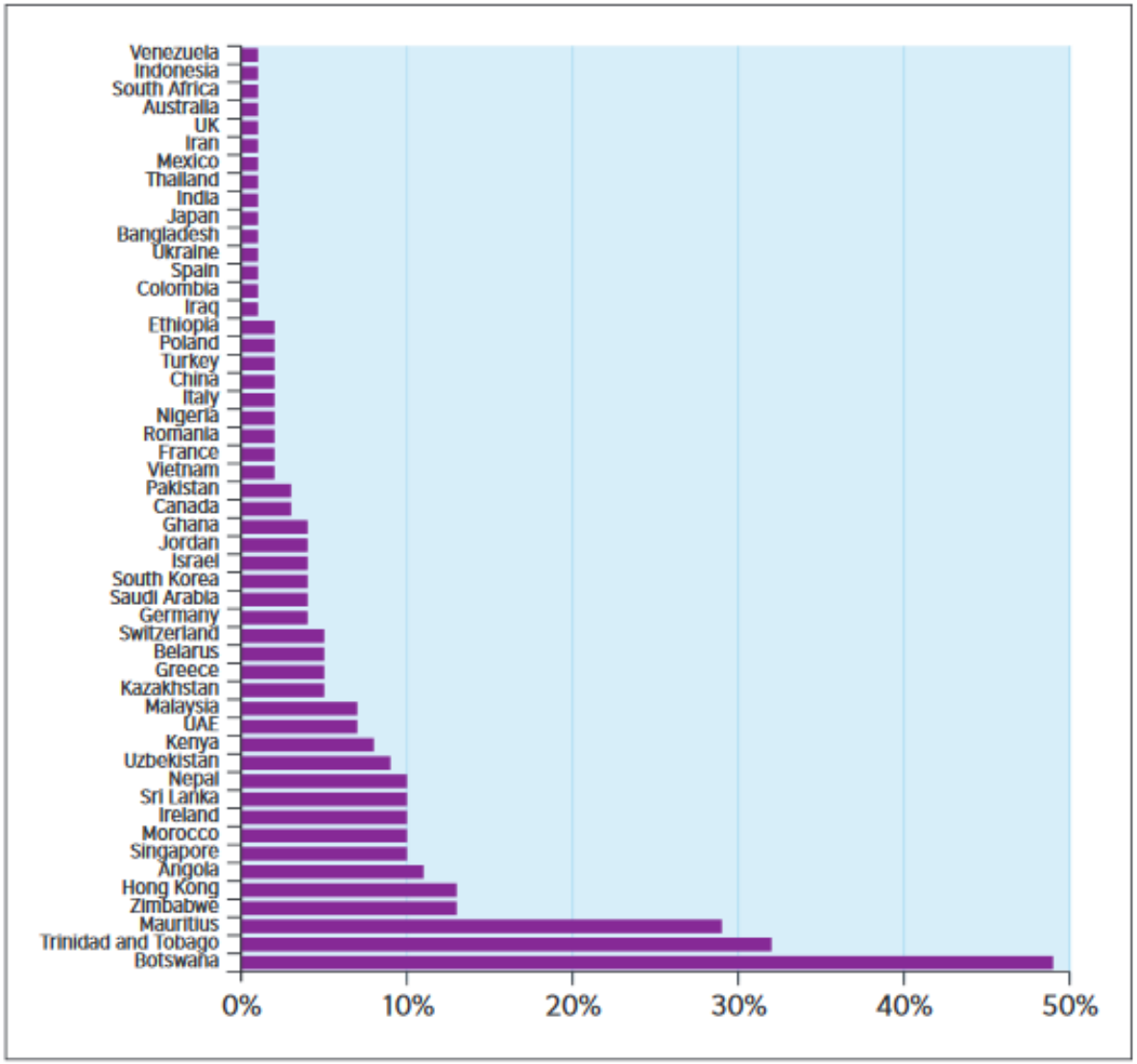
Fig 2.2: Global tertiary enrolments and mobile students and global GDP and trade (1980–2009)

Outbound mobility

The major origin markets for outbound mobile tertiary students include China, India, South Korea, Germany, Turkey and France, with the distribution of outbound mobile students more balanced than for tertiary enrolments. China and India contribute 29 per cent of total tertiary enrolments but only 21 per cent of total outbound mobile students. This is because they have lower outbound mobility ratios than the global average.

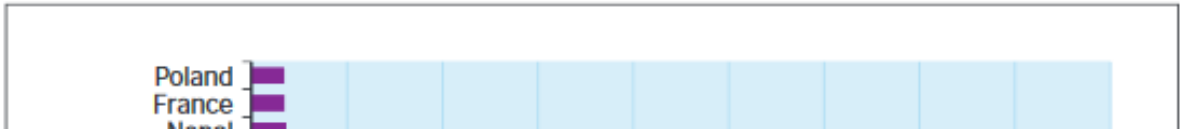
Outbound mobility ratios vary significantly across countries, ranging from above 25 per cent for Mauritius, Trinidad and Tobago and Botswana, to less than one per cent for the UK, US, Australia, Russia, Indonesia, Philippines, Egypt and Brazil. Markets such as Hong Kong, Singapore, Ireland, Nepal, UAE and South Korea have above global average outbound mobility ratios, as do many European countries due to high mobility across borders within Europe and growing provision in widely spoken English language postgraduate courses, (see Fig 2.3).

China has been the source of one-third of global growth in outbound mobile students between 2002 and 2009, followed by India (10 per cent), however, their outbound mobility ratio is significantly low. Other countries appearing in the top 20 for outbound mobile student growth (in absolute terms) are South Korea, Vietnam, Russia, Iran, Saudi Arabia, Nigeria, Turkey, Pakistan, Malaysia and Nepal (see Fig 2.4).



Source: UNESCO, OECD, Oxford Economics

Fig 2.3: Global tertiary outbound mobility ratio by origin market (2009)



in higher education, that countries such as China, Singapore, Malaysia and a Gulf state would account for a higher share of global inbound student mobility growth.

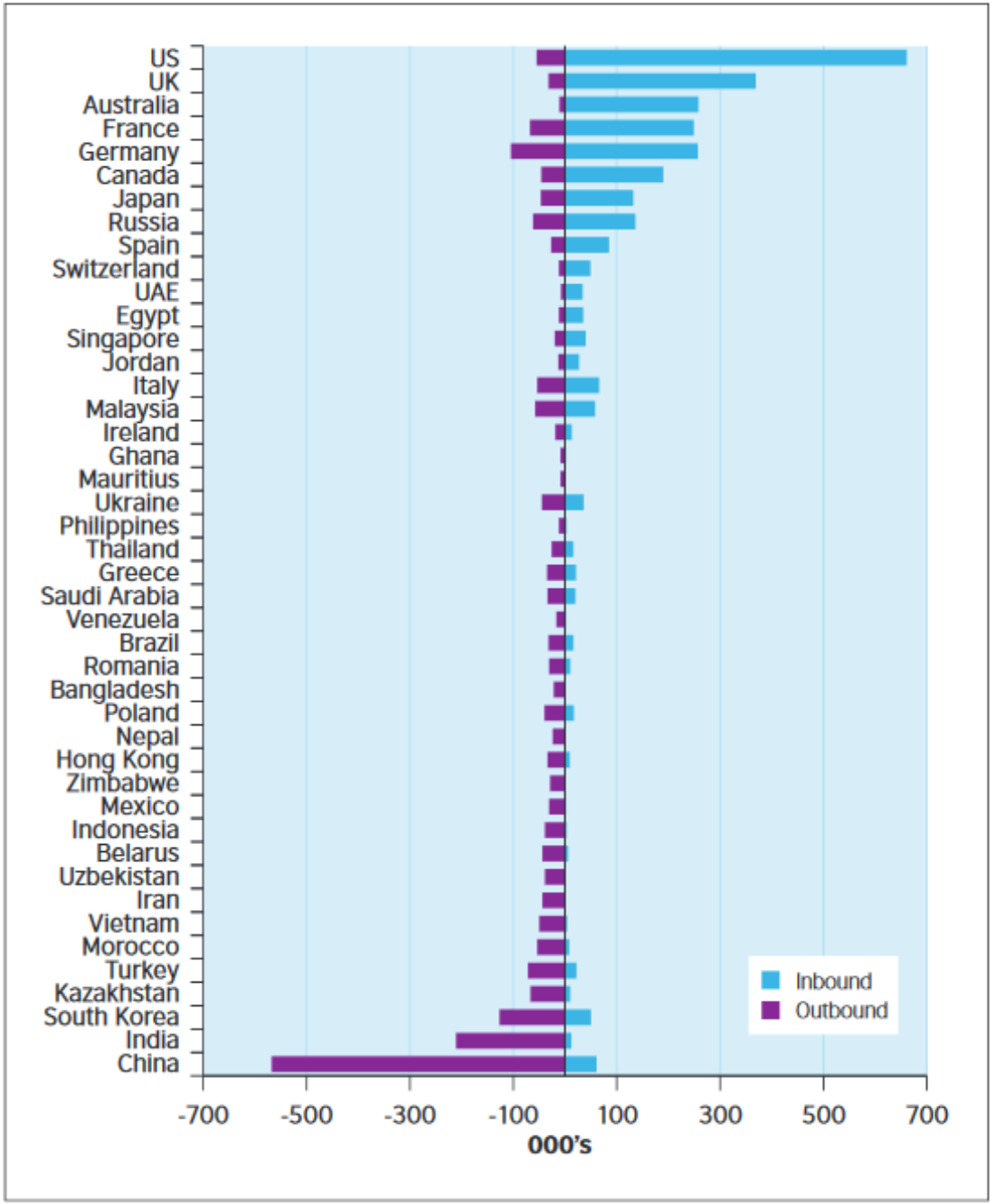
For example, China's inbound flow of tertiary mobile students doubled between 2006 and 2009, but this is based on the lower UIS figures. A doubling of growth in the larger Project ATLAS figure of 265,000 inbound students would dwarf historic growth in any other country, including the US, UK and Australia.

Net balance of inbound and outbound mobility

It is useful to present the net balance between the inbound and outbound student flows to and from countries. The major countries where inbound mobile students exceed outbound mobile students are the US, UK, Australia, France, Germany, Canada, Japan and Russia.

The major countries where outbound mobile students exceed inbound mobile students are China, India, South Korea, Kazakhstan, Turkey, Morocco and Vietnam.

Malaysia is an interesting case study where inbound (41,000)[11] and outbound (58,000) flows were similarly large in 2009. This compares to a large net mobility outflow in 1998 when inbound flows were only 3,000 and outbound flows were still high at 50,000–55,000. As such, the evolution of Malaysia's global tertiary education experience serves as a useful lesson for other countries with aspirations to follow a similar path (see Fig 2.7).



Source: UNESCO, Oxford Economics

Academic research collaboration

Volume of research outputs and propensity to collaborate

Scopus and Thomson Reuters data show that the total volume of global research articles produced is skewed heavily towards a small number of major nations: between 1996 and 2010 almost 25 per cent of articles were produced by the US, while just five countries accounted for more than half of the total (the US, China, UK, Japan and Germany), and 15 countries for more than three quarters of the total.

Rates of international research collaboration vary significantly from country to country, now averaging around 45 per cent in the UK, 30 per cent in the US, 15 per cent in China (where they have actually fallen since the 1990s), 45–50 per cent in Germany and the Netherlands, and up to 65 per cent in Switzerland. In 2010, the top countries for producing academic research articles through international collaboration were the US (143,000), UK (62,000), Germany (58,000), China (47,000), France (44,000), Canada (35,000) and Italy (30,000).

There is a strong correlation between international research collaboration rates and citations per document. While not a proof of causality, the association is positive (i.e. the direction expected) and significant (for 2010, 80 per cent of the variation in citations per document across countries is 'explained' by international research collaboration rates).

Country	Total Research articles produced, 2010 (Scopus)	Total collaboratively produced articles, 2010 (Scopus)	Collaboration rate (%)	Citations per document (2010)	Citations per document (1996–2010)
US	502,804	143,048	28.5%	1.75	20.18
UK	139,683	62,061	44.4%	1.81	17.42
Germany	130,031	58,150	44.7%	1.76	15.79
China	320,800	47,093	14.7%	0.67	5.66
France	94,740	44,092	46.5%	1.57	15.09
Canada	77,694	34,675	44.6%	1.72	17.55
Italy	73,562	30,175	41.0%	1.60	14.45
Japan	113,246	26,828	23.7%	1.17	11.72
Australia	59,058	25,867	43.8%	1.60	16.00
Spain	64,985	25,845	39.8%	1.48	13.12
Netherlands	43,214	22,087	51.1%	2.22	20.05
Switzerland	30,866	19,208	62.2%	2.38	21.77
Sweden	26,842	14,758	55.0%	2.03	19.09
South Korea	55,546	14,359	25.9%	1.08	9.82
Belgium	23,716	13,573	57.2%	1.95	17.10
India	71,975	12,567	17.5%	0.76	7.27
Brazil	45,189	11,004	24.4%	0.79	9.57
Russia	36,053	10,589	29.4%	0.60	5.21

Source: Scopus (Elsevier) data, extracted January 2012

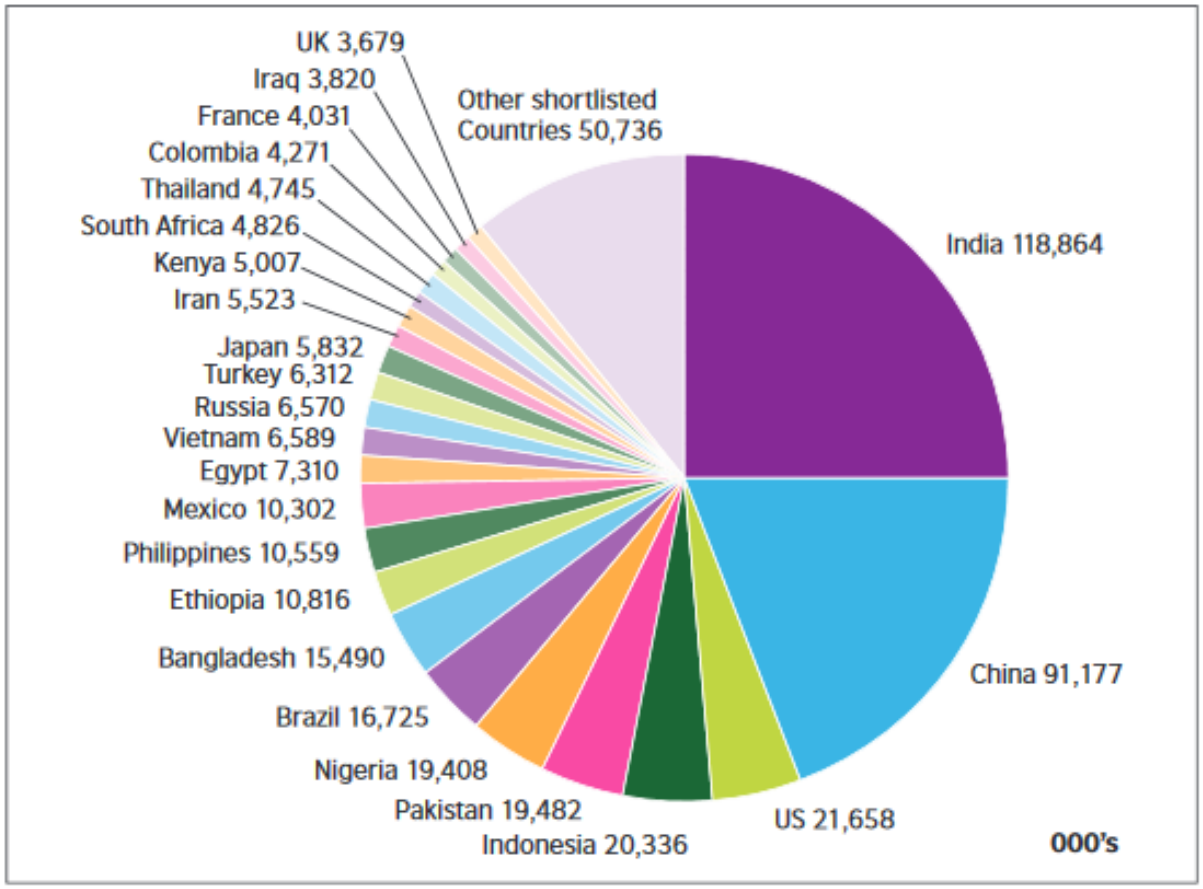
Table 2.2: Global share (by volume) of collaboratively produced research articles (2010)

Demographic drivers

By 2020, just four countries – India, China, US and Indonesia – will account for over half of the world's 18–22 population. A further quarter of the world's 18–22 population in 2020 will come from Pakistan, Nigeria, Brazil, Bangladesh, Ethiopia, Philippines, Mexico, Egypt and Vietnam. The 50+ shortlisted countries considered in this study are projected to account for over 80 per cent of the world's 18–22 population in 2020 (see Fig 3.1).

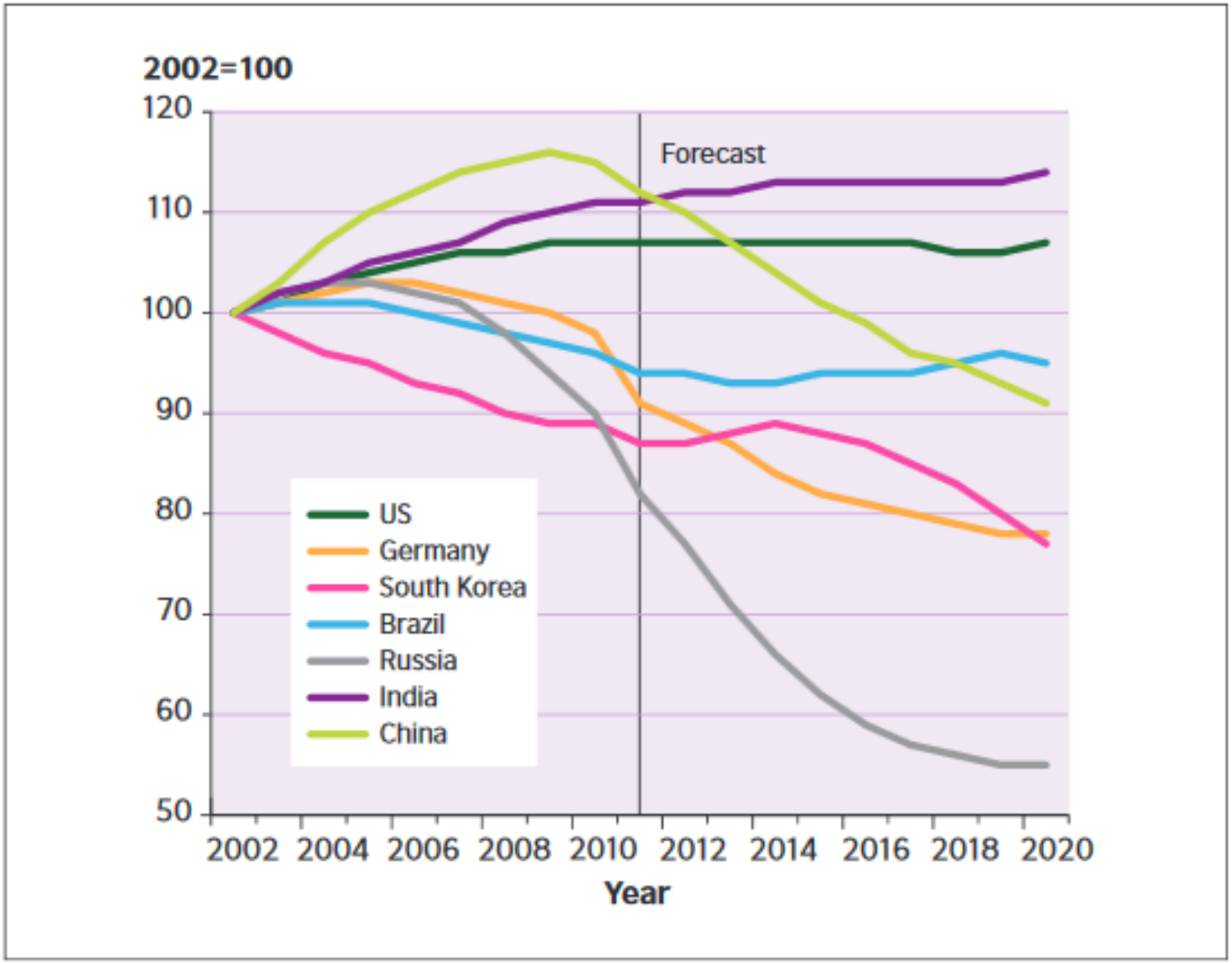
While China's 18–22 population is forecast to remain large at over 90 million in 2020, it is projected by the UN Population Division to fall by over 20 million over the next decade given the current number of 8–12 year-olds. As demographic forecasts are based on current population levels of younger age groups, they tend to be accurate (see Fig 3.2).

However, it is not only China that is projected to experience a fall in its tertiary age population. With birth rates having fallen for a sustained period in (i) many advanced economies (although there have been some recent reversals which are expected to be temporary), and (ii) the nations of the Commonwealth of



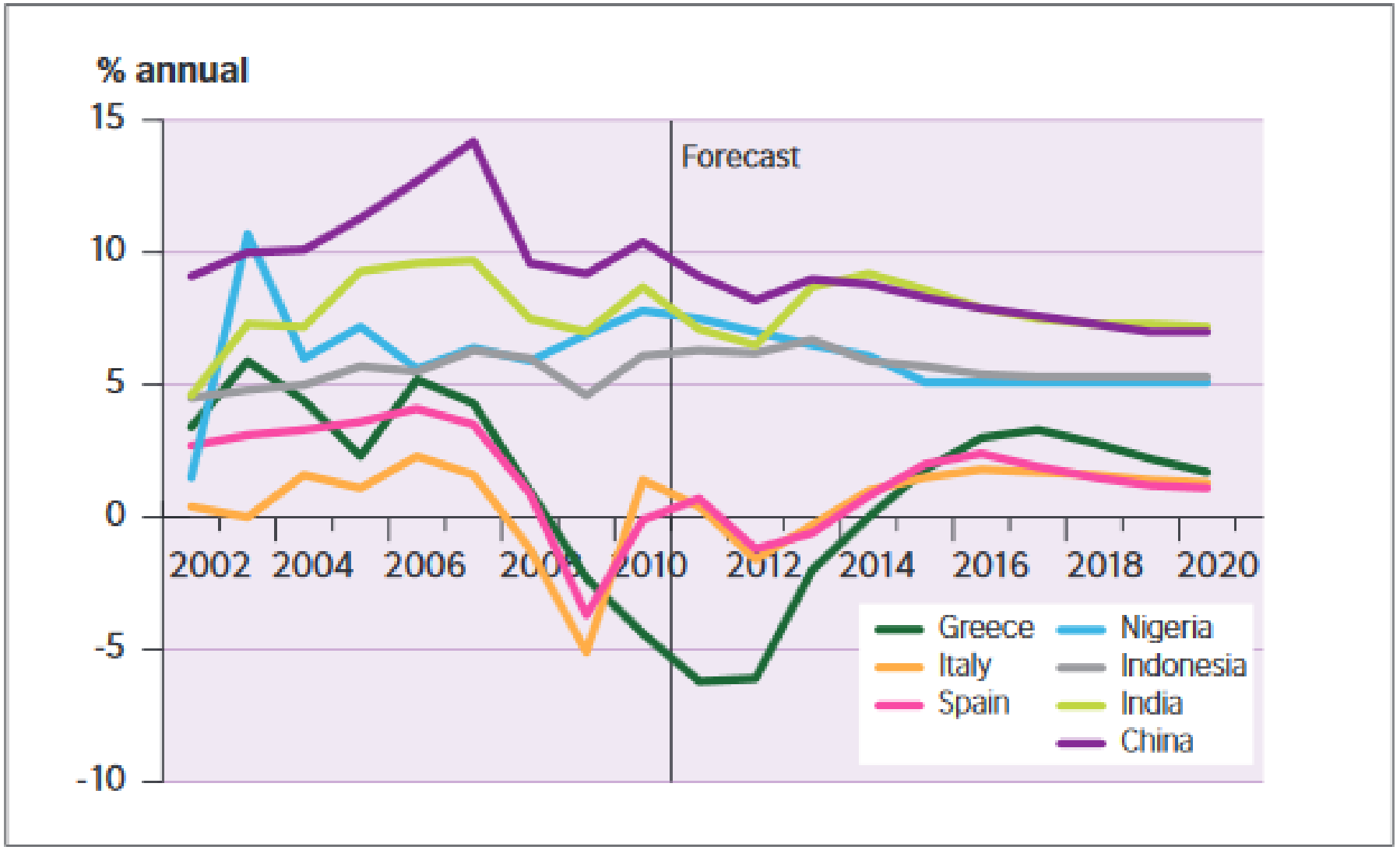
Source: UN Population Division, Oxford Economics

Fig 3.1: Global tertiary age (18–22) population (2020)



Source: UN Population Division, Oxford Economics

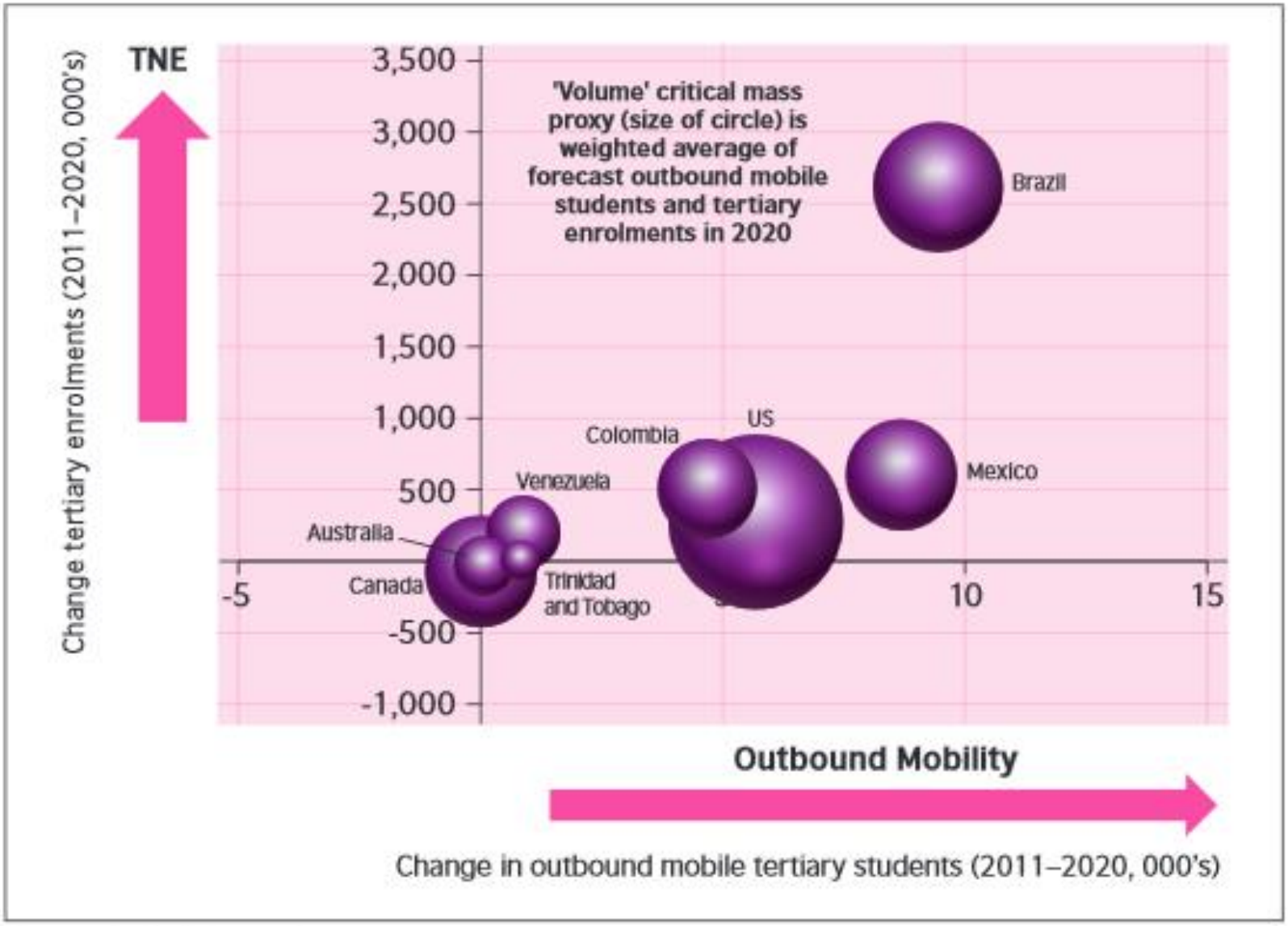
Fig 3.3: Global tertiary age (18–22) population



Source: Haver Analytics, Oxford Economics

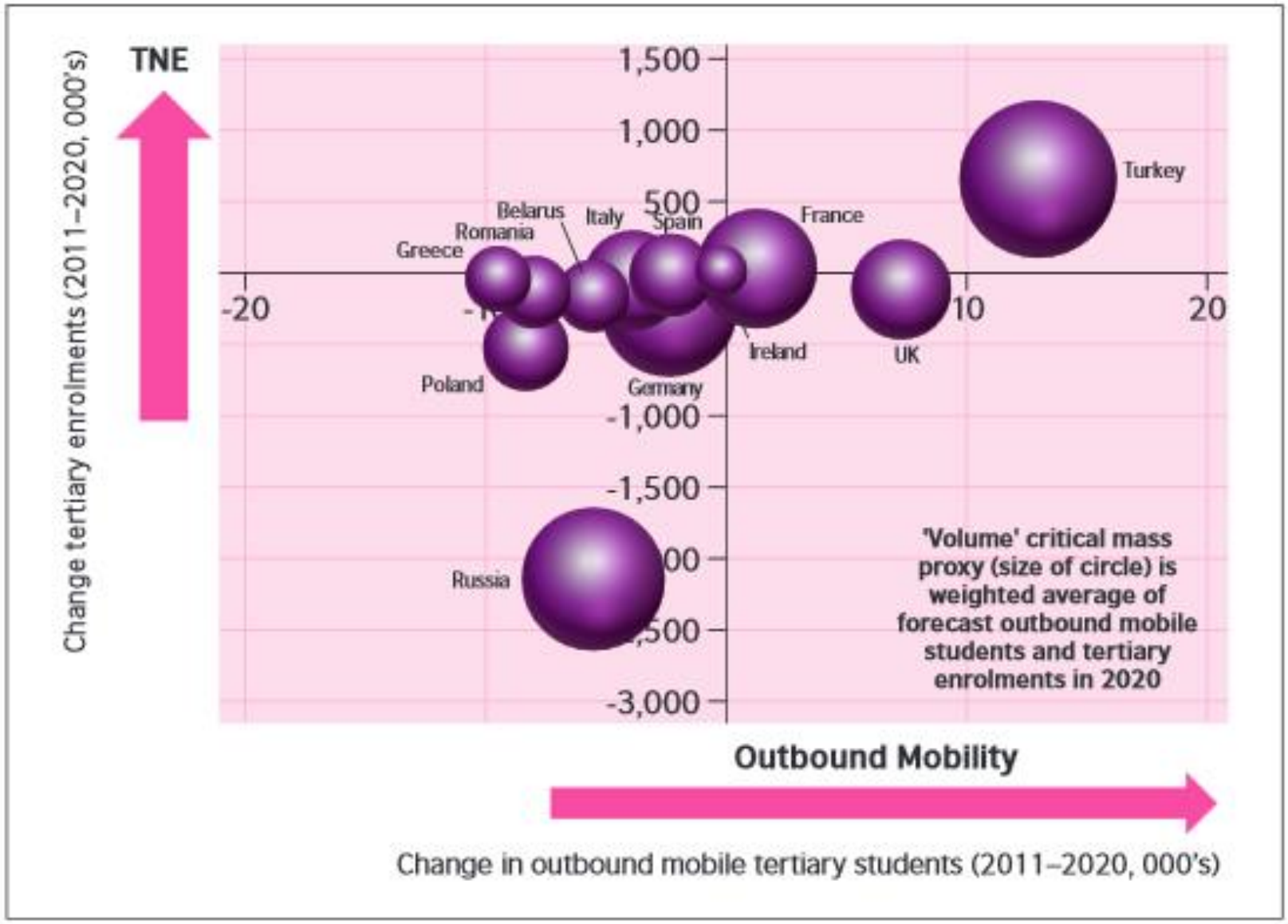
Fig 3.6: Selected country GDP growth

Americas and Oceania



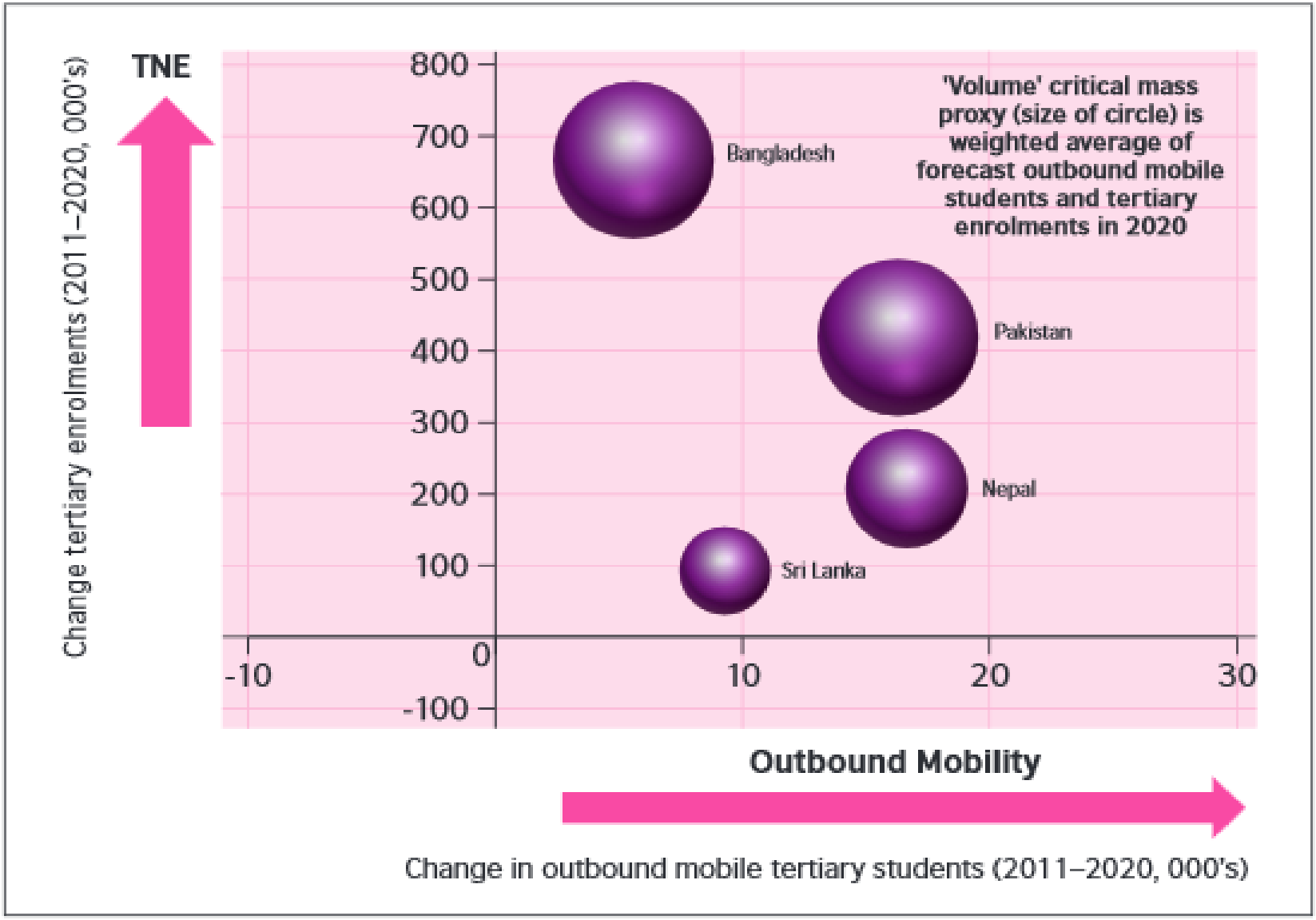
Source: Oxford Economics

Europe



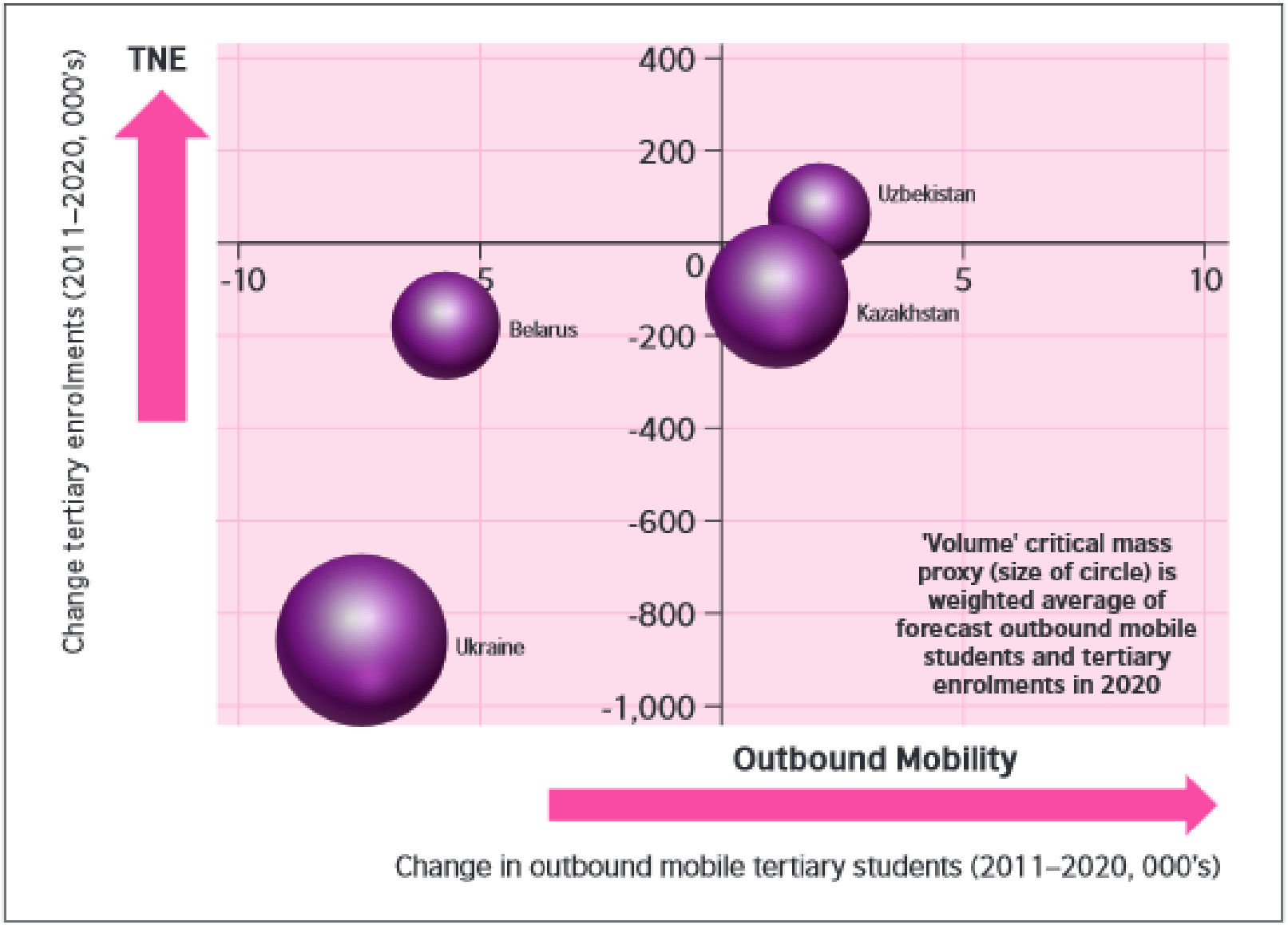
Source: Oxford Economics

South Asia (excluding India)



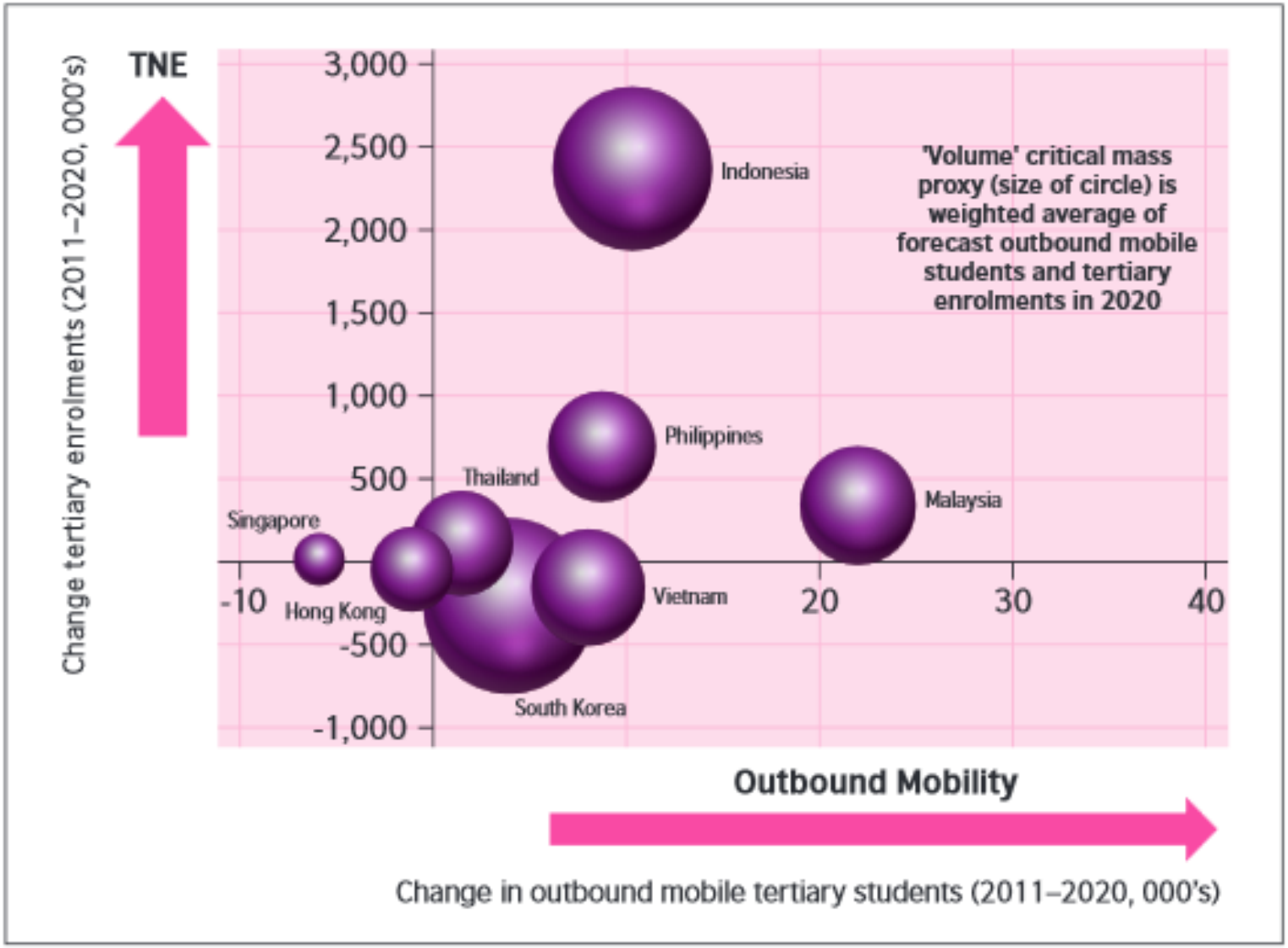
Source: Oxford Economics

Commonwealth of Independent States (CIS) (excluding Russia)



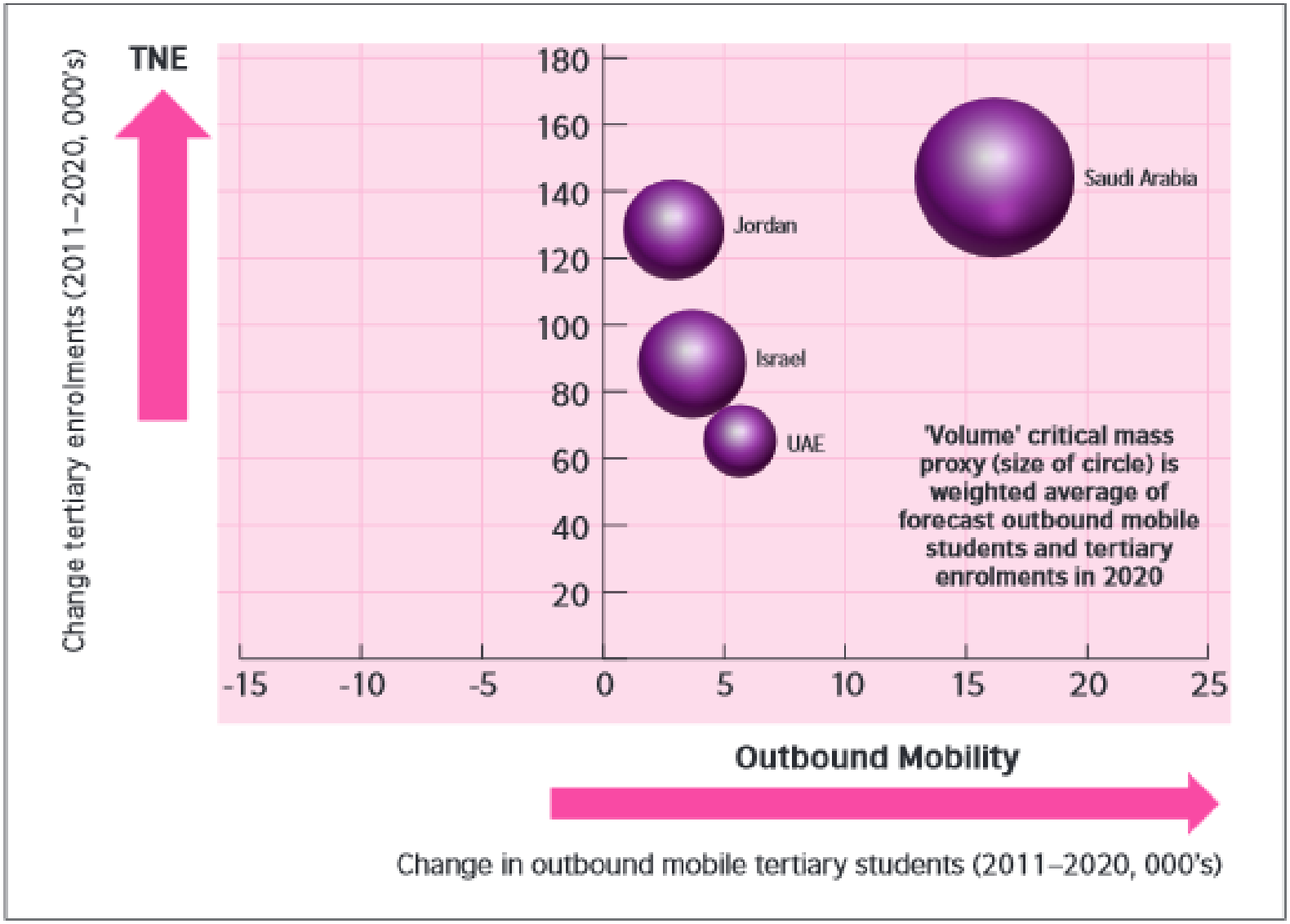
Source: Oxford Economics

East and South East Asia (excluding China)



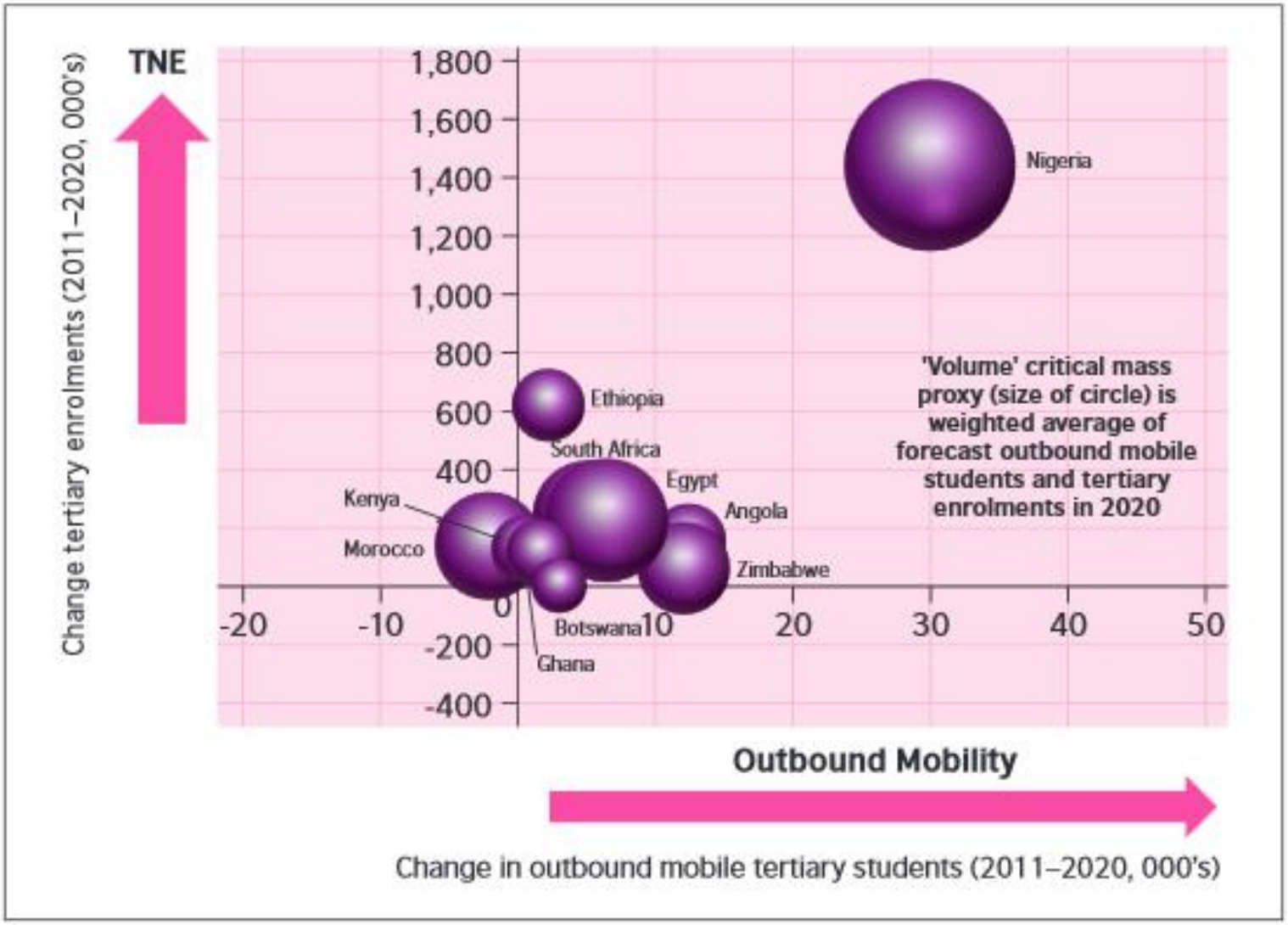
Source: Oxford Economics

Middle East



Source: Oxford Economics

Africa



Source: Oxford Economics